

REMARKS

Claims 1, 23, 25, and 30-32 are amended herein. Claim 22 is cancelled herein. Claims 1, 9, 10, 17, 20, 22-25 and 27-35 are pending in the application.

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested.

35 U.S.C. § 112 Rejections

On page 4 of the Office Action, the Examiner rejected claim 35 under the first paragraph of 35 U.S.C. § 112 as failing to comply with the written description requirement. This rejection is respectfully traversed.

The Examiner takes the position that switching the directional movement of the pointing device between a 360-degree direction and a non-360-degree direction is new matter not supported by the specification. The Examiner further indicates that the specification identifies the operational mode as horizontal, vertical, and four other directions, with the pointing device switching between those directions. This is incorrect. The specification clearly discloses that the pointing device can be switched between many different operational modes, including an any direction mode (corresponding to the claimed 360-degree direction) and a vertical direction mode, a horizontal direction mode, a four direction mode, and an eight direction mode (which correspond to the claimed non-360-degree direction). The Examiners attention is drawn to Fig. 1 and page 10, line 16 through page 12, line 15 of the specification. On page 10, lines 21-22, the specification discloses that “typically, the pointing device can be operated in any direction” (emphasis added). Furthermore, the specification discloses that other than the “any direction” mode, other modes include a vertical direction mode, a horizontal direction mode, a four direction mode, and an eight direction mode. Accordingly, withdrawal of the rejection is respectfully requested.

Prior Art Rejections

On pages 5-12 of the Office Action, the Examiner rejected claims 1, 17, 19-20, 22-23, 25, 29, and 33-35 as unpatentable over Nishimoto, Published U.S. Application 2002/0155857, in view of Japanese Patent Publication 05181603 to Hotta et al.

On pages 12-16 of the Office Action, the Examiner rejected claims 9-10, 24, 27-28, and 30-32 as unpatentable over Nishimoto in view of Hotta et al. and further in view of U.S. Patent 6,765,598 to Kim.

The Examiner's rejections are traversed below.

Referring to claim 1, it is submitted that the cited prior art does not teach or suggest:

a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated, wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

In other words, the invention of claim 1 provides a control unit for changing an operation mode of the pointing device according to a positional orientation of contents displayed on the display screen at the time the pointing device is operated. Furthermore, the control unit determines a direction in which the operational object can be moved on the display screen according to the operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen. Thus, the present invention as set forth in claim 1 provides a pointing device which has a limited range of movement selected based upon the positional orientation of the current display on a display screen.

For example, when the invention of claim 1, is incorporated into the main control unit (CPU) of a device such as a mobile telephone, PDA, or the like, it is quite likely that the device will be capable of running many different applications in which it is desirable for the user to be able to move the pointing device in any direction, such as the Internet, games, etc. Thus, when one of these applications is running, the control unit of claim 1 allows the pointing device to move the operational object in any direction. However, other applications that run on the device may contain more traditional interfaces in which icons are aligned in a straight line manner. When running these applications, it may be difficult to operate the operational object in any direction and, therefore, it is more desirable to limit movement of the operational object to only the directions in which the icons are arranged. In this situation, the control unit of claim 1 limits the movement of the operational object. As such, the control unit of claim 1 controls the functionality of the operational object based on the positional orientation of the contents displayed on the display screen just when the pointing device is operated. These features are not taught by either Nishimoto or Hotta et al.

The Nishimoto reference is directed to a pointing device and mobile telephone in which an optical sensor for reading an optical image of a finger that is kept in contact therewith is installed below an LCD for displaying information (see Abstract). The pointing device has a sensor section which reads an optical image of a finger and detects movements of the finger. Based upon the movements of the finger detected by the sensor section, the control section shifts the pointer (paragraph [0009]). After the pointer has been set to a desired piece of information by the finger contacting the sensor section, the finger is further used to push a switching section so that information is easily selected (paragraph [0014]). Referring to Figs. 1 and 2, a finger 30 is shifted while it is in contact with a sensor window 8 so as to set the pointer to a desired menu among menus displayed on an LCD 3. An optical image of the finger, detected by an image sensor 44c is transmitted to a CPU 10 (Fig. 3) so that the shifting direction and shift distance of the finger 30 are found. Based on this, the CPU 10 shifts the pointer displayed on LCD 3 (paragraphs [0052 and 0053]). However, Nishimoto does not disclose that the movement capabilities of the pointer are set based on the positional orientation of contents displayed on the LCD screen 3. In fact, Nishimoto provides for only one directional operation mode for the pointer.

The Hotta et al. reference is directed to an information input device which precisely shifts the cursor on a display in a completely horizontal or vertical direction by operating the cursor while pressing a switch provided on a mouse. This does not correspond to the features of claim 1 of the present invention. Hotta et al. does not disclose limiting the movement of the cursor based on the positional orientation of the contents being displayed on a display screen, but instead requires the user to decide when to limit the movement of the cursor to either a completely horizontal or completely vertical movement by pressing an additional switch provided on the mouse. Furthermore, Kim fails to make up for the deficiencies in Nishimoto and Hotta et al.

For the above reasons, it is submitted that claim 1 patentably distinguishes over the cited prior art.

Claims 9, 10, 17, 20, 30, 33 and 34 depend, directly or indirectly, from claim 1 and include all the features of that claim plus additional features which are not taught or suggested by the cited prior art.

Claim 23 is directed to a method for controlling a pointing device and recites:

changing an operational mode of said pointing device in advance according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated,
wherein a direction in which said operational object can be moved on said display screen is determined according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

Therefore, it is submitted that claim 23 patentably distinguishes over the prior art.

Claims 24 and 31 depend, directly or indirectly, from claim 23 and include all of the features of that claim plus additional features which are not taught or suggested by the prior art.
Therefore, it is submitted that claims 24 and 31 patentably distinguish over the prior art.

Claim 25 is directed to a mobile telephone and recites:

a control unit changing an operation mode of said pointing device according to a positional orientation of contents displayed on said display screen at the time said pointing device is operated,
wherein said control unit determines a direction in which said operational object can be moved on said display screen according to said operation mode to limit the movement of the operational object on the display screen to less than the 360-degree direction based on the positional orientation of contents displayed on the display screen.

Therefore, it is submitted that claim 25 patentably distinguishes over the prior art.

Claims 27, 28, 29 and 32 depend, directly or indirectly from claim 25 and include all the features of that claim, plus additional features which are not taught or suggested by the prior art.
Therefore, it is submitted that these claims patentably distinguish over the prior art.

None of the cited prior art discusses or suggests:

a control unit configured to switch an operation mode of the pointing device between a mode in which the operational object has 360-degree movement on the display screen and a mode in which the operational object is limited to less than 360-degree movement on the display screen according to an application that is running on the mobile communication apparatus at the time the pointing device is operated,

as recited in claim 35. In other words, the invention of claim 35 provides a control unit for changing an operation mode of the pointing device between a mode in which the operational object has 360-degree movement and a mode in which the operational object is limited to less than 360-degree movement, according to an application that is running on the mobile communication apparatus at the time the pointing device is operated. These features are not

taught by the cited prior art. Thus, it is submitted that claim 35 patentably distinguishes over the prior art.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

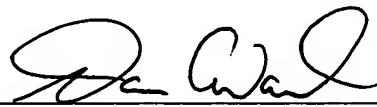
Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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